

REMARKS

Claims 1-20 are pending in this application. By this Amendment, claims 1, 4, 6 and 7 are amended. The amendments introduce no new matter. Claim 18 is canceled without prejudice, or disclaimer of, the subject matter recited in that claim. Reconsideration of the application based on the above amendments and the following remarks is respectfully requested.

The Office Action, in paragraph 9, states that claims 10-17, 19 and 20 are allowed. Applicants appreciate the allowance of these claims. Further, the Office Action, in paragraph 10, indicates that claims 2 and 3 recite allowable subject matter. Specifically, the Office Action indicates that these claims would be allowable if rewritten in independent form to include all the features of the base claims and any intervening claims. Applicants appreciate this indication of allowability but respectfully submit that at least independent claim 1, from which these claims depend, is allowable for the reasons set forth below.

The Office Action, in paragraph 2, rejects claim 18 under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. The Office Action, in paragraph 4, rejects claim 18 under 35 U.S.C. §112, second paragraph, as being indefinite. In particular, the Examiner asserts that claim 18 is a single means claim and that no structure is recited by claim 18. Without conceding the propriety of these rejections, claim 18 is canceled to obviate these rejections.

The Office Action, in paragraph 3, rejects claims 1, 4, 5, 8, 9 and 18 under 35 U.S.C. §102(b) as being anticipated by "Holographic memory with localized recording", Applied Optics, Vol. 40, No. 23, August 10, 2001 to Moser and Psaltis (hereinafter "Moser"). The Office Action, in paragraph 5, rejects claims 6 and 7 under 35 U.S.C. §103(a) as being unpatentable over Moser. These rejections are respectfully traversed.

The Office Action, in paragraph 6, asserts that Moser teaches a holographic memory device with features that are alleged to correspond to the combination of all of the features recited in claim 1. The analysis of the Office Action fails for at least the following reasons.

Moser does not teach, nor can it reasonably be considered to have suggested, detecting, on an optical recording medium where holograms are recorded, a recording region where a hologram to be erased is recorded; and erasing the hologram by irradiating the detected recording region with a reference light beam and a random modulation signal light beam at the same time, as positively recited in claim 1.

For example, Moser does not disclose erasing the hologram by irradiating the detected recording region with a reference light beam and a random modulation signal light beam at the same time. The Office Action, in paragraph 6, by reference to the previous Office Action, asserts that Moser teaches irradiating a signal light beam while erasing the hologram. With reference to Fig. 3, the Office Action, in the Response to Arguments, further asserts that Moser discloses a violet beam, or allegedly a signal beam, is crossed with a green reference beam in order to selectively erase the hologram. The Office further asserts that Moser explicitly states that the green reference beam and the violet signal beams are used together to erase the hologram. The Office Action's interpretation of Moser, however, is inaccurate.

The Office Action's assertion that Moser teaches a violet signal beam is clearly contrary to the disclosure of Moser. First, Moser refers to a signal, reference and violet beam each with different intensities (page 3911, right column). Second, with reference to Fig. 3, Moser teaches that "[t]he signal beam propagates through the crystal close to one of its edges" (page 3911, left column). In the succeeding sentence, Moser teaches "[t]his ensures that the violet light sensitizes efficiently the entire area to be recorded as shown in the inset of Fig.3" (emphasis added) (page 3911, left column). In other words, the signal beam propagates close to one of its edges such that the violet sensitizing beam has time to erase the optical recording

medium in preparation for recording by the signal light beam. Moser teaches as much in stating that "holograms are recorded from position 1(exit crystal facet) to M (entrance crystal facet)" (page 3911, left column). Third, Moser teaches that the sensitizing beam originates from the laser diode and co-propagates with the reference beam (page 3911, left column). As depicted in Fig. 3, the reference beam and the violet beam clearly co-propagate in a direction different from the signal beam. As such, it is unreasonable to assert that Moser refers to a violet beam and signal beam interchangeably.

As noted throughout the Moser article, and specifically on page 3911, any interpretation of Moser is limited to a signal beam that only records by irradiating a holographic medium. As discussed above, it is the violet sensitizing beam in Moser that co-propagates with the reference beam to sensitize, or erase, the optical recording medium for recording by the signal light beam. As also discussed above, Moser, itself, reinforces this interpretation when it states, "[t]his ensures that the violet light sensitizes efficiently the entire area to be recorded as shown in the inset of Fig. 3 (emphasis added) (page 3911, left column). Further, Moser teaches that each hologram is separately sensitized for 5 minutes and recorded for 3 minutes (page 3911, right column). As such, it is unreasonable to assert that Moser even suggests erasing the hologram by irradiating the detected recording region with a reference light beam and a random modulation signal light beam at the same, as recited in claim 1.

As another example, Moser does not disclose detecting, on an optical recording medium where holograms are recorded, a recording region where a hologram to be erased is recorded. While Moser apparently discloses random pattern data displayed on the SLM, Moser also teaches randomizing the signal beam for the purpose of measuring SNR. In other words, the signal beam only records (page 3911, right column). In this regard, it is an object of the subject matter of the pending claims to irradiate the random modulated signal light

beam and reference light beam in an area where data desired not to be reproduced is written. Moser contemplates neither this object nor the above-quoted feature.

For at least the foregoing reasons, Moser cannot reasonably be considered to teach, or to have suggested, the combination of all of the features positively recited in independent claim 1. Additionally, claims 4-9 are also neither taught, nor would they have been suggested, by Moser for at least the respective dependence of these claims, directly or indirectly, on an allowable base claim, as well as for the separately patentable subject matter that each of these claims recites.

Accordingly, reconsideration and withdrawal of the rejections of claims 1 and 4-9 under 35 U.S.C. §§102(e) or 103(a) as being anticipated by, or unpatentable over, the applied prior art reference are respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1 and 4-9, in addition to the indication of allowability of claims 2 and 3, and the allowance of claims 10-17, 19 and 20, are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicant's undersigned representative at the telephone number set forth below.

Respectfully submitted,



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